

REMARKS

This communication is in response to the Office Action issued April 10, 2002. Claims 1-16 are pending in the application. The Examiner rejected claims 1-3 and 7-9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicant regards as the invention. The Examiner rejected claims 1-6, 10-13, 15, and 16 under 35 U.S.C. § 102 in view of either SU 612018 or SU 477240. The Examiner rejected claims 7-9 and 14¹ under 35 U.S.C. § 103 in view of varying combinations of SU 612018, SU 477240, and U.S. Patent No. 4,192,551 to Weimer *et al.* (Weimer).

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

In section 3 of the Office Action, the Examiner rejected claims 1-3 and 7-9 as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicant regards as the invention. Specifically, the Examiner cited “A method of advancing a mining machine including an advancing machine” as being indefinite.

Claims 1 and 7 have been amended above as suggested by the Examiner. In view of the foregoing, the Examiner’s rejection under 35 U.S.C. § 112, second paragraph, of claims 1-3 and 7-9 is believed to be overcome.

Claim Rejections Under 35 U.S.C. § 102

In sections 4-5 of the Office Action, the Examiner rejected claims 1-6, 10-13, 15, and 16 under 35 U.S.C. § 102 in view of either SU 612018 or SU 477240. Specifically, the

¹ While the Examiner cited claims 7 and 14 in section 7 of the Office Action, it appears the Examiner meant to cite claims 7 and 9, as evidenced by the second paragraph on page 7.

Examiner rejected claims 1, 2, 4, 5, 10-13, and 15 in view of SU 612018, and claims 1, 3, 4, 6, 10-13, and 16 in view of SU 477240.

With the device of the SU 612018 reference, the clamping (bracing) of the machine is achieved through a hinge whereby the self-clamping canopy is angled back and the forward movement of the machine generates the clamping (bracing) forces between the roof and floor through the reaction to the forward thrust. The self-clamping canopy relies on the forward thrust in order to engage. In the present invention, bracing is achieved by extending the braces and impinging them into the walls of the mine opening on both sides. The bracing cylinders are fixedly mounted on the frame of the advancing machine, rather than the hinged mounting of the SU 612018 reference.

Regarding the rejection of claim 4, the Examiner stated “[t]he SU 612018 reference teaches ... increasing a distance between the advancing machine and the mining machine by different amounts on two of the sides.” However, no such disclosure is seen in the reference. Regarding the rejections of claims 12 and 13, the Examiner stated “[t]he SU 612018 reference also teaches the hydraulic cylinder.” However, no such disclosure is seen in the reference.

With the device of the SU 477240 reference, the self clamping levers are angled away from the direction of the advance and rely on a forward thrust to self clamp between the walls. Similarly to the device of SU 612018, the clamping levers will not engage until the cylinders begin extending. In the present invention, the braces are positively engaged with the walls and fixedly mounted. The braces are extended and impinged to the walls before the advancing cylinders begin advancing the mining machine, and do not rely on the forward thrust in order to engage. Furthermore, with the device of the SU 477240 reference, the clamping levers are mounted on a common pin. To assure the engagement with the walls, the

levers are linked together by bracing springs. This arrangement does not allow precise positioning of the machine within the mine opening, particularly when advancing around the curve. Any bias to one or the other side, such as when steering the machine, would cause rotation around the pins to which the self clamping levers are mounted, thus allowing side motion and/or rotation of either one or both of the platforms. This problem would be amplified further by the possibility of the bracing springs to compress. In contrast, in the present invention the braces are fixedly attached to the advancing machine and impinge positively into the walls prior to any advancing or steering maneuver. This prevents any rotation or side motion of the advancing machine. It also prevents any such motion of the mining machine, except as intended by the operator.

The claims have been amended to recite that the mining machine and the advancing machine are braced independent of each other and that the braces are fixedly mounted. Such recitations are not seen in the cited references. In view of the foregoing, the Examiner's rejection under 35 U.S.C. § 102 to claims 1-6, 10-13, 15, and 16 is believed to be overcome.

Claim Rejections Under 35 U.S.C. § 103

In sections 6-8 of the Office Action, the Examiner rejected claims 7-9 and 14 under 35 U.S.C. § 103 in view of varying combinations of SU 612018, SU 477240, and U.S. Patent No. 4,192,551 to Weimer *et al.* (Weimer). Specifically, the Examiner rejected claims 7 and 8 in view of SU 612018, claims 7 and 9 in view of SU 477240, and claim 14 in view of SU 612018 modified by Weimer.

As discussed above with respect to the rejections under 35 U.S.C. § 102, the SU 612108 and SU 477240 references fail to disclose each and every recitation of the claims.

Weimer does not satisfy the noted shortcomings. Since each and every recitation of the claim is not present in the cited references, the rejections of claims 7-9 and 14 are improper and must be withdrawn. See, for example, MPEP § 2143.03.

In view of the foregoing, the Examiner's rejections under 35 U.S.C. § 103 to claims 7-9 and 14 are believed to be overcome.

Additional Fees

The Commissioner is hereby authorized to charge any insufficiency, including a one-month extension for response fee of \$55, or credit any overpayment associated with this application to Deposit Account No. 19-5127 (order no. 18155.0006).

Conclusion

Claims 1, 2, 4, 7, and 10 have been amended. Claims 1-16 are pending in the application. In view of the foregoing, all of the Examiner's rejections to the claims are believed to be overcome. The Applicant respectfully requests reconsideration and issuance of a Notice of Allowance for all claims. Should the Examiner feel further communication would help prosecution, he is urged to call the undersigned at the telephone number provided below.

Respectfully Submitted,



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APPENDIX A:

MARKED-UP COPY OF THE AMENDED CLAIMS

1 1. (Amended) A method of advancing a mining machine [including] having an
2 advancing machine operatively connected thereto, comprising:
3 bracing the advancing machine between side walls of [within] a mine opening
4 independently of the mining machine by a first set of braces fixedly mounted on the advancing
5 machine;
6 moving the mining machine away from the advancing machine;
7 bracing the mining machine between the side walls independently of the advancing
8 machine by a second set of braces fixedly mounted on the mining machine;
9 releasing the advancing machine; and
10 moving the advancing machine toward the mining machine.

1 2. (Amended) A method according to claim 1, wherein said bracing includes bracing the
2 advancing machine and the mining machine between a roof and a floor of said mine opening.

1 4. (Amended) A method of steering a mining machine having a plurality of sides and
2 having an advancing machine operatively connected thereto, comprising:
3 bracing the advancing machine between side walls of [within] a mine opening
4 independently of the mining machine by a set of braces fixedly mounted on the advancing
5 machine; and
6 increasing a distance between the advancing machine and the mining machine by
7 different amounts on two of the plurality of sides.

7. (Amended) A method of retrieving a mining machine [including] having an advancing machine operatively connected thereto, comprising:

bracing the advancing machine between side walls of [within] a mine opening independently from the mining machine by a first set of braces fixedly mounted on the advancing machine;

moving the mining machine toward the advancing machine;

releasing the advancing machine;

bracing the mining machine between side walls of a mine opening independently from the advancing machine by a second set of braces fixedly mounted on the mining machine; and

moving the advancing machine away from the mining machine.

10. (Amended) An apparatus for advancing and steering a mining machine, comprising:

an advancing machine;

[a brace coupled to said advancing machine and being extendable to brace said advancing machine within a mine opening; and]

an extender operatively coupled between said advancing machine and the mining machine and capable of extension and retraction; and

a brace coupled to said advancing machine and being extendable independently of said extender to brace said advancing machine between side walls of a mine opening.